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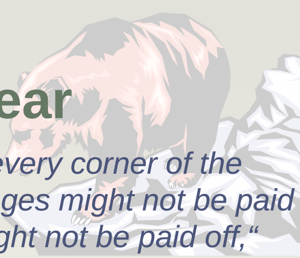
Bureau of Economic Geology, The University of Texas at Austin

The Credit Crisis and Its Impact on the Energy Sector

IECA Spring Conference 2008

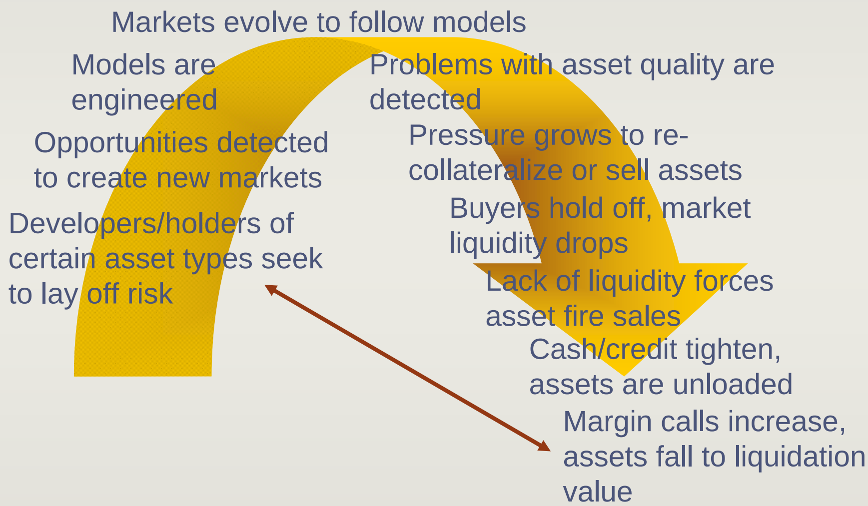
Death of the Bear



But the turmoil has spread since to almost every corner of the credit markets. "The realization that mortgages might not be paid off led lenders to realize that other loans might not be paid off,“ said Douglas Elmendorft, a former Fed economist…With each firm intricately intertwined with others in a maze of loans, credit lines, derivatives and swaps, the Fed and Treasury agreed that letting Bear Stearns collapse quickly was a risk not worth taking, because the consequences were simply unknowable…"At Northern Rock, it was depositors running. At Bear Stearns, it was counterparties”.

“Fed Races to Rescue Bear Stearns in Bid to Steady Financial System”, by Kate Kelley, Greg Ip, Robin Sidel, WSJ, 3/15/2008

Capital Destruction 201



Liquidity or Quality?

Bob Eisenbeis, a former executive vice president of the Federal Reserve Bank of Atlanta, says the problem is more than an inability to find ready buyers for assets. "It is time to step back and recognize that the current situation isn't a liquidity issue and hasn't been for some time now," said Mr. Eisenbeis, the chief monetary economist for Cumberland Advisers. "Rather, there is uncertainty about the ***underlying quality of assets*** *-- which is a solvency issue, driven by a breakdown in highly leveraged positions."*

"Debt Reckoning: US Receives a Margin Call", Liz Rappaport and Justin LaHart, WSJ, 3/15/2008

Brother, Can You Spare Some Credit?

- Cross-cutting effects: US and global economies – not all news is bad news
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What Will We Know (and When Will We Know It)?

Downside/neutral effects:

- Housing, financial market woes impact consumer demand, overall GDP
- Inflation fears impact economic stimulus
- Continued erosion of dollar confidence
- Ratings pressure, transparency pressure

Neutral/upside effects:

- No panic (yet), slow drip provides more time for response?
- Core inflation is still low, room for more action?
- Export competitiveness and repatriation benefits
- Scrutiny on bank lending standards and practices

Here We Go Again…

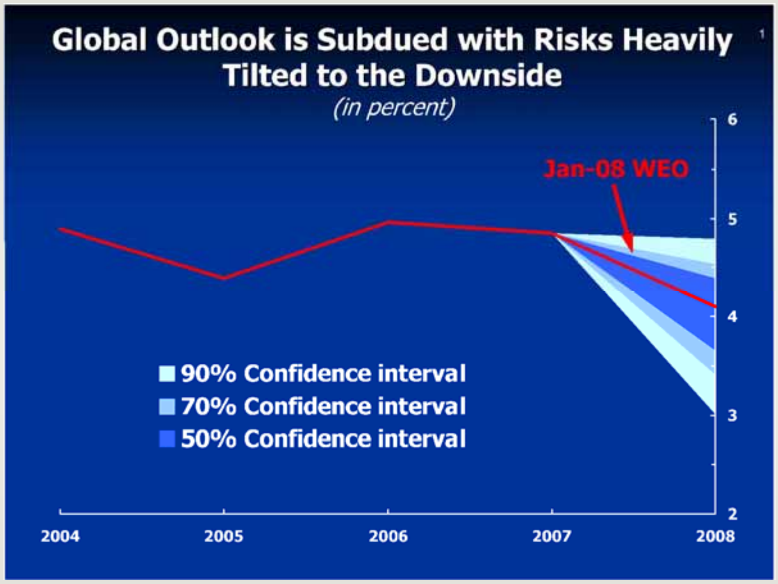
__Mark to market__ was a gift to the world from SEC Chief Richard Breeden…With the help of __accounting mavens__, he argued that requiring banks and other companies to account for financial assets at current market prices, __as if the institutions were being sized up for liquidation__, would provide a rough-tough discipline for the edification of investors, regulators and managers…Particularly notable were…warnings that the new rule, when combined with risk-based capital standards, might lead banks to hold fewer loans on their own books, packaging more of them as complex securities for sale to investors. Overlooked, too, was…the propensity of the speculators…to go on strike during moments when their services are most needed…Banks are left oxymoronically trying to estimate what market prices would be if markets existed.

"Mark to Meltdown?", Holman Jenkins
Wall Street Journal, 3/5/2008

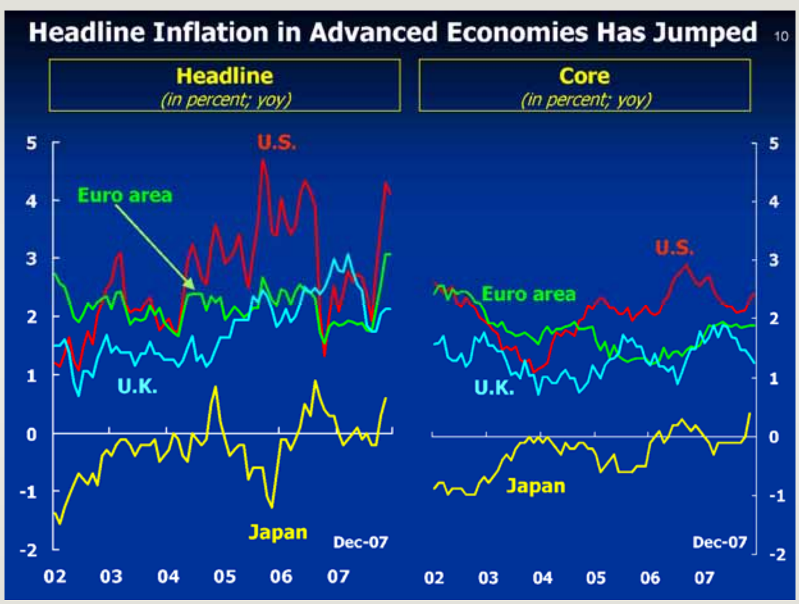
IMF's Take (January 08)

…financial market strains originating in the [US] subprime sector—and associated losses on bank balance sheets—have intensified, while the recent steep sell-off in global equity markets was symptomatic of rising uncertainty. Economic growth in the [US] slowed notably in the fourth quarter, with recent indicators showing weakening of manufacturing and housing sector activity, employment, and consumption. Growth has also slowed in western Europe. In Japan…consumer and business sentiment has weakened…emerging market and developing economies have thus far continued to expand strongly.

http://www.imf.org/external/pubs/ft/weo/2008/update/01/index.htm



Dr. Michelle Michot Foss, CEE-UT



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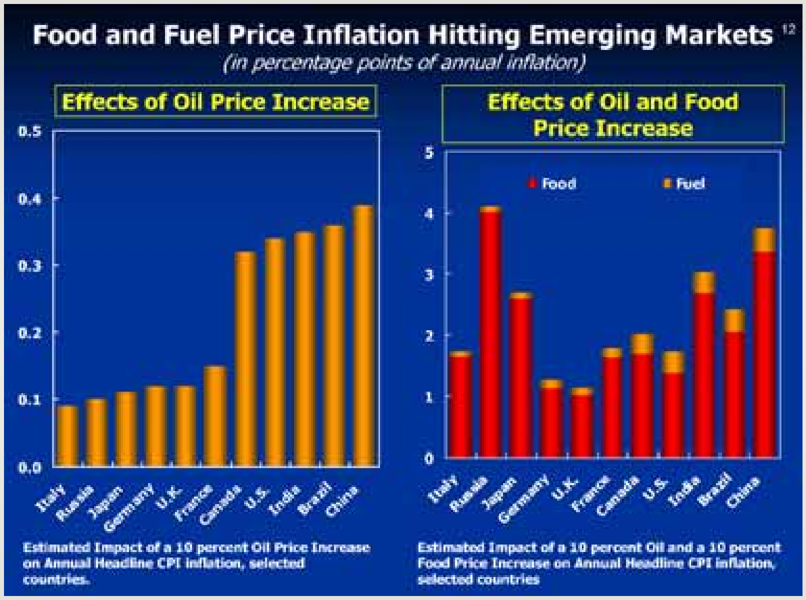

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Source: IMF, January 08 WEO Update

Dr. Michelle Michot Foss, CEE-UT

Where Do Things Stand?

- How much room is there for the Fed to maneuver?
  - Not much, given interest rates/dollar/inflation mix
- What should federal policy be? Do we bail out lenders? Do we bail out property owners? Who should be prosecuted?
- How do we, or can we, make markets more secure?
  - What will be the regulatory price to bear?
- How do we price and manage risk?

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I Was Like, Oh My God*, Did I Really *Say* That? (August 2006)

Probability	Scenario
Low	Oil at $90, gas at $15: oil price pulls other costs, inflation, gas demand fundamentals
Medium (coin flip)	Oil at $48, gas at $8.28: approaching equilibrium and parity?
Higher	Oil $45-60, gas at $3-5: diverging fundamentals

* Tribute to Billy Collins

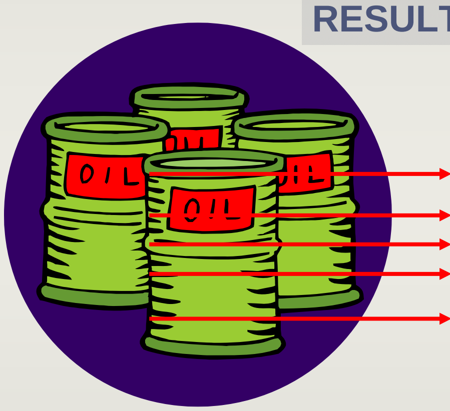
A Line in the Sand

Ali al-Naimi, who controls the world's biggest oil exports, said crude prices are unlikely to fall below $60 a barrel because of rising costs to develop tar sands and alternative fuels. ***Producing oil from…alternatives costs about $60 to $70 a barrel, ``and, therefore, a line has been drawn below which the price cannot fall,''*** *al-Naimi said in an interview published in Petrostrategies, a Paris-based industry newsletter.*

First Enercast, March 3, 2008

Determining the Price of Oil (2006)

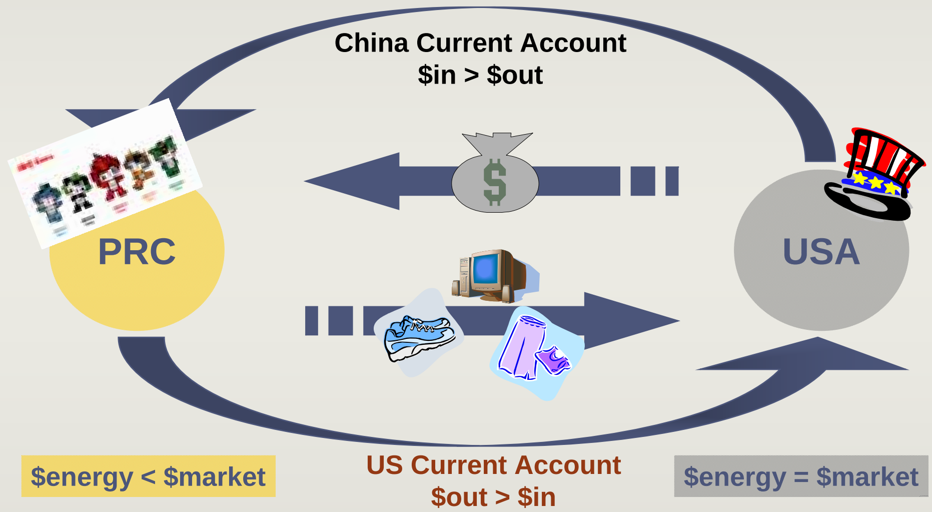
RESULT: Crude oil is overpriced



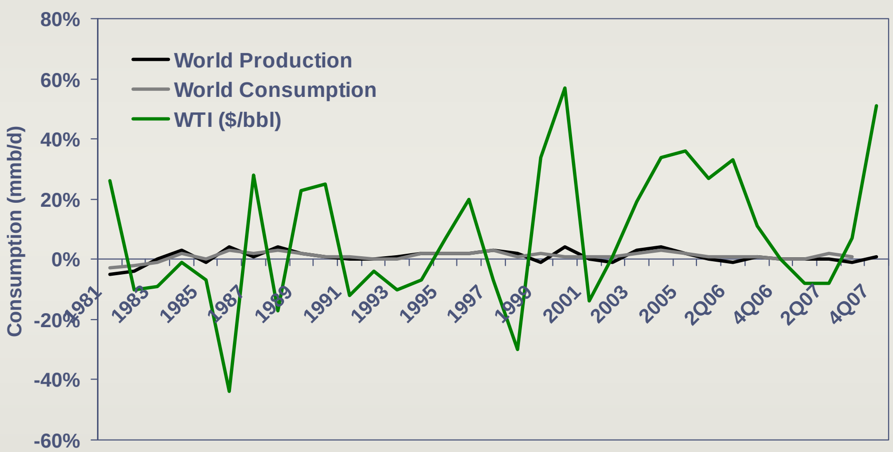
- Plus financial speculation ($15-20)
- Plus "artificial" demand (10-20%)
- Plus growth in demand
- Plus ***political premium**
- Finding and lifting cost (role of marginal producer)

*** Oil for economic development**

Fun with China



Oil Production and Consumption



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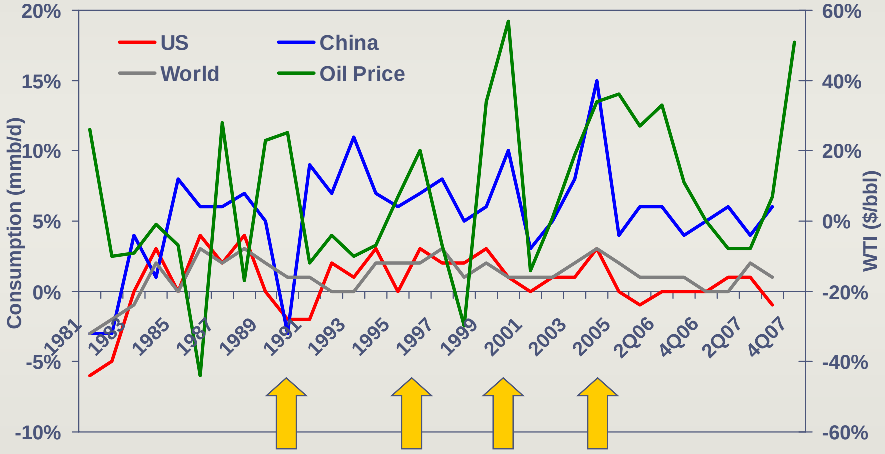
And that's the way it was…May 24, 2006 IECA Houston

Growth in Oil Consumption

Impact of "Managed Prices" in China



Sources: BP Statistical Review; USEIA

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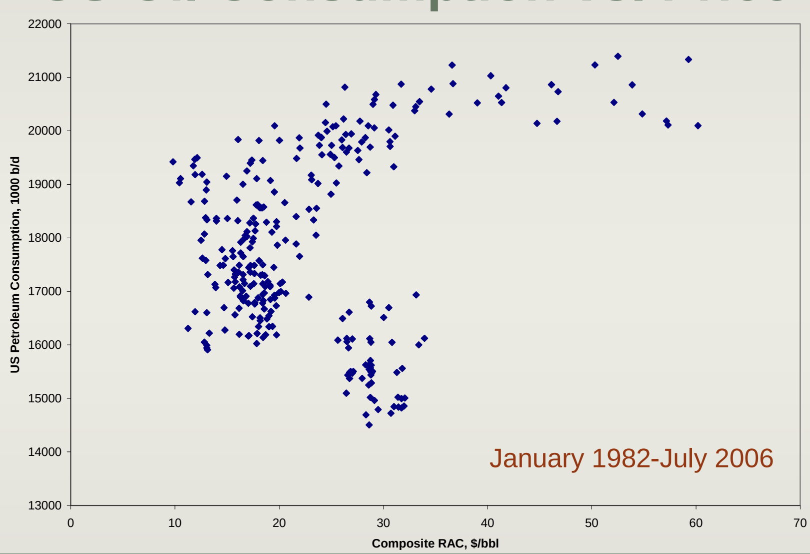
US Oil Consumption vs. Price



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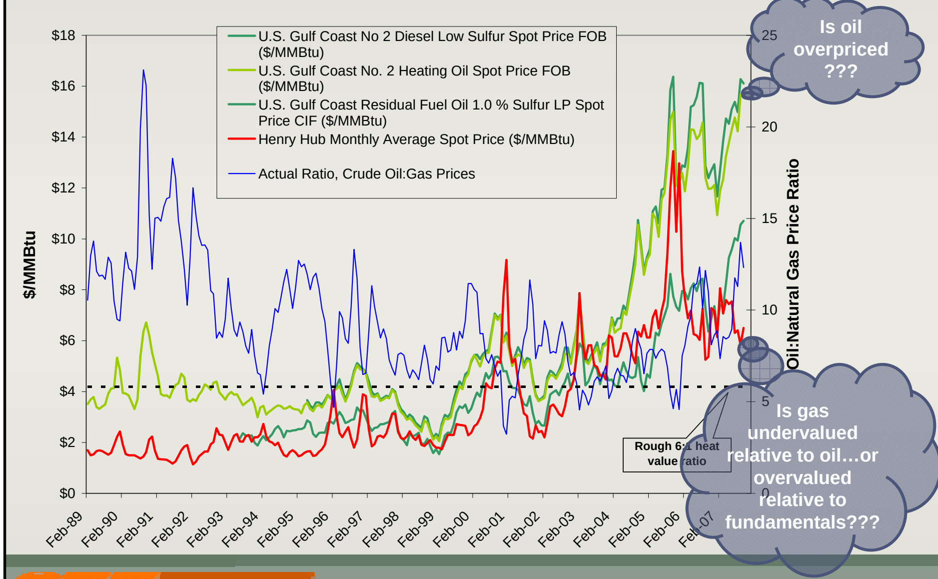
Natural Gas vs. Petroleum Prices



Chakib, We Hardly Knew Ye

The decision to stand pat reflects the view of [OPEC] that there is little it can do to bring down oil prices. Citing higher U.S. inventories of crude, ministers said the weak dollar was driving oil's rally…Chakib Khelil, OPEC's president, said crude stocks were above their five-year average and that soaring crude prices were caused by a weak dollar, the credit crisis in the U.S. and "speculative activity in petroleum markets." ***"It's due to the mismanagement of the U.S. economy that's affecting... economies in the rest of the world," he said…****Wednesday's meeting came with OPEC in a new position. Once its decisions were the chief driver of crude prices. But factors such as U.S. interest-rate policy and bond- and equity-market movements are increasingly important.*

"OPEC Keeps Output Level Steady", WSJ, 3/5/2008

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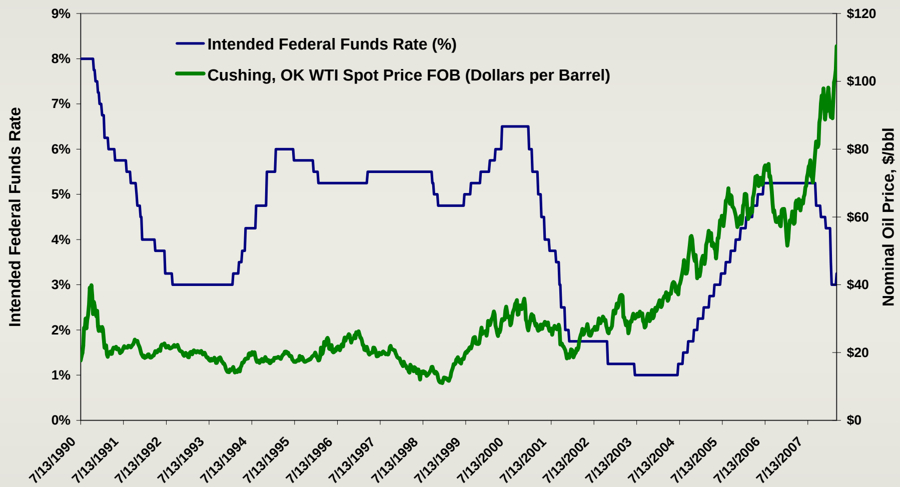
Oil and Money, I



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Sources: Federal Reserve Bank System; New York Mercantile; US Energy Information Administration; Center for Energy Economics, University of Texas-Austin

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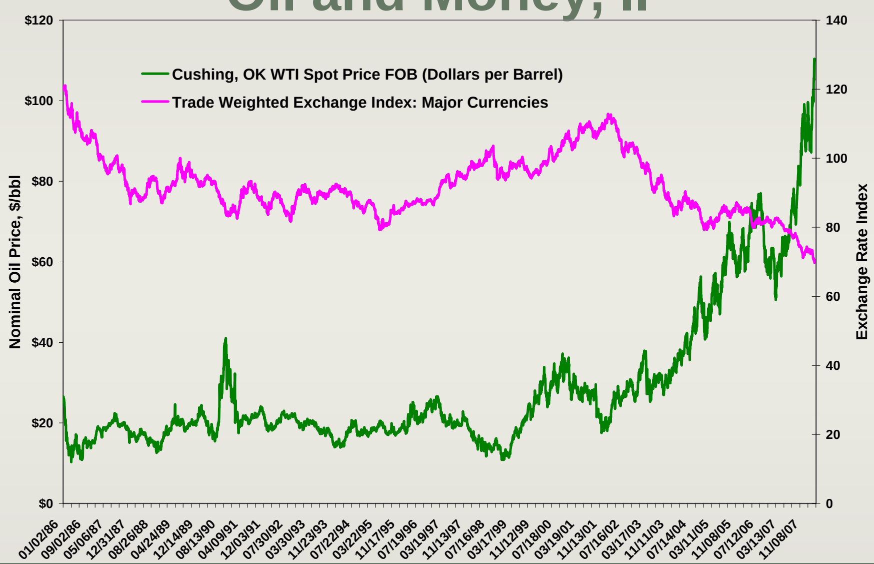
Oil and Money, II



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Sources: St. Louis Federal Reserve Bank; New York Mercantile; US Energy Information Administration; Center for Energy Economics, University of Texas-Austin

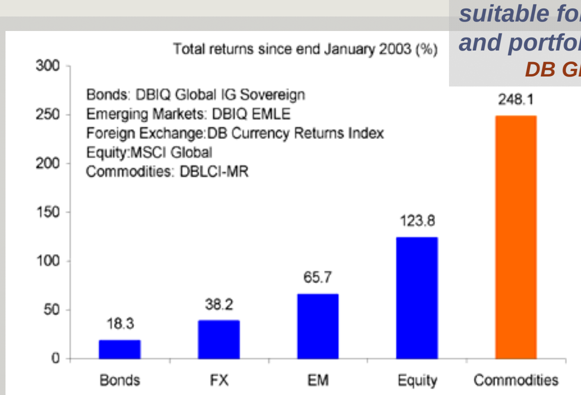
Anatomy of a Speculator

Cuts in U.S. interest rates have prompted investors to pile into assets with better returns than stocks and bonds, particularly commodities…

"OPEC Keeps Output Level Steady"
WSJ, 3/5/2008

Looking Under the Mattress

Commodities have been one of the best performing asset classes over the past five years and have been widely accepted by institutional investors as an asset class in their own right, suitable for absolute returns and portfolio diversification purposes.
DB Global Markets Research, 2/8/2008



Source: DB Global Markets Research, Bloomberg

"Money is pouring into commodities as an asset class and the instruments we trade might not be up to it".
Comment from DB GMR, February 08

What If…

*…the 1987 crash marked…a collapse brought about not by real or even perceived economic problems but by the new complexity of financial markets. A new strategy known as portfolio insurance…had been taken up in a big way…evolved from the most influential idea on Wall Street, an options-pricing model called **Black-Scholes**. The model is based on the assumption that a trader can suck all the risk out of the market by taking a short position and increasing that position as the market falls…Nearly every employee stock-ownership plan uses Black-Scholes…The glitch was discovered only after the fact: When a market is crashing and no one is willing to buy, it's impossible to sell short. If too many investors are trying to unload stocks…[t]heir desire to sell drives the market lower…sending the market into a bottomless free fall.*

"Wall Street's Black Hole, Michael Lewis
Portfolio.com, March 2008

Anatomy of a Speculator, Continued

*[demand for commodities as an asset class] has helped push oil prices up. And there is still widespread uncertainty about how far interest rates can fall. **Indeed, some OPEC members worry that the money that has flowed into oil could just as easily flow out again, sending prices into a tailspin.***

"OPEC Keeps Output Level Steady",
WSJ, 3/5/2008

Can the Circle be Unbroken?

A few smart traders may have abandoned the theory, but the market itself hasn't; in fact, its influence has mushroomed in the most fantastic ways. At the end of 2006, according to the Bank for International Settlements, there were $415 trillion in derivatives—that is, $415 trillion in securities for which there is no completely satisfactory pricing model. Added to this are trillions more in exchange-traded options, employee stock options, mortgage bonds, and God knows what else—most of which, presumably, are still priced using some version of Black-Scholes. Investors need to believe that there's a rational price for what they buy, even if it requires a leap of faith. "The model created markets," Seo says. ***"Markets follow models."***

"Wall Street's Black Hole", Michael Lewis
Portfolio.com, March 2008

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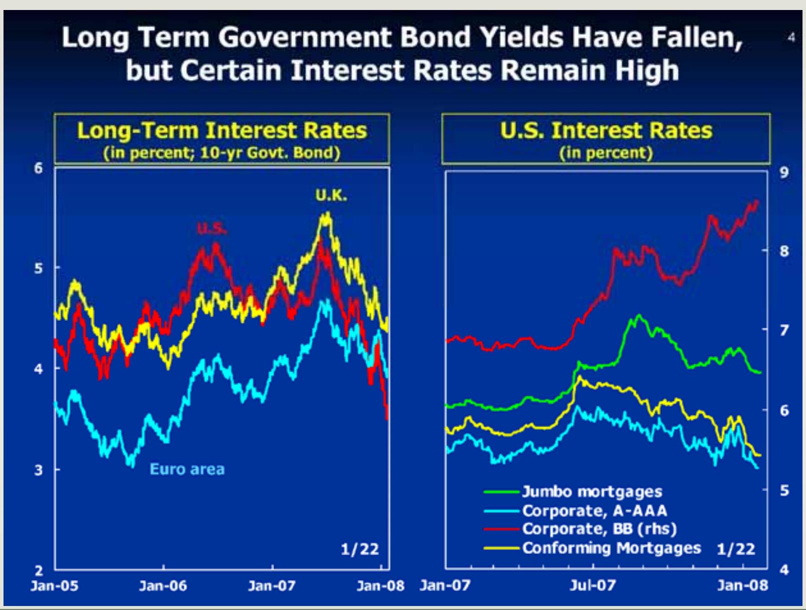
Specific Energy Sector/Energy Credit Considerations

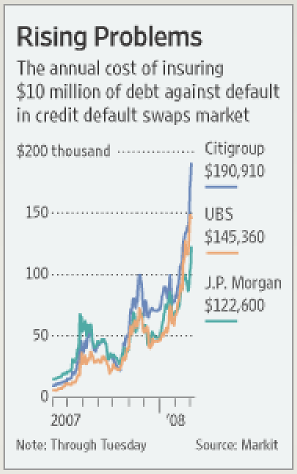
- Summary – implications for energy demand
  - Is oil in a speculative bubble?
- Overleveraged companies
  - What's YOUR price deck?
- Counterparty credit worthiness and credit access
- Deal-specific considerations
  - Supplier-customer transactions
  - Other transactions



Source: IMF, January 08 WEO Update

Example, Prepay Deals

…municipal bonds used to finance such deals have become considerably more risky as the major credit-rating agencies have soured on bond [issuers]…Since the financial institutions are under pressure, investors are less willing to buy bonds that are tied to their credit. In addition…the broader debt markets have shifted heavily into US treasuries, causing a narrowing of spreads between taxable and tax-exempt".



WSJ, 3/6/08

"Prepay deal grow scarce in stressed markets" Gas Daily, 12/26/07

Muni Head Aches

Banks also are increasing the collateral they demand when they lend to hedge funds that hold municipal bonds…Lenders declared…that municipal-bond-fund managers needed to post more collateral to back their borrowings…The sell-off flooded the market with municipal bonds, making it more expensive for municipalities to borrow…

"Debt Reckoning: US Receives a Margin Call", Liz Rappaport and Justin LaHart, WSJ, 3/15/2008

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Grinding Through It

Throughout the credit crisis specifics have been in short supply for investors. For a change, they got a flurry of particulars on Thursday, and they didn't like what they saw…"You're starting to see more signs of counterparty risk" among companies that were on the opposite side of one another's credit trades in recent years, said Jeff Middleswart, president of Behind the Numbers, a Dallas-based research firm. ***"It raises the possibility that some of these companies could have a fire sale to raise capital"*** *by slashing the prices of securities on their books, which could lead to another round of big write-downs.*

"Mounting Liquidation Fears Squeeze U.S. Stock Market", Peter McKay, WSJ, 3/6/08

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So, How Seriously Should We Take It?

When it comes to inadequate CDO [collateralized debt obligation] disclosures, the VIEs [variable interest entities] that matter are those that are not consolidated on a company's balance sheet…This is partly the fault of the accounting rule [FIN 460R] that governs off balance sheet VIEs…Under FIN 46-R, companies must disclose their ***maximum loss exposure****…banks often add comments in financial statements that effectively tell investors not to take these maximum loss numbers* ***seriously…Did banks have a good idea of what off balance sheet CDO losses would be before they were disclosed?...Almost certainly.***

"The Next Credit Scandal", Peter Evans
Fortune, 11/26/07

Perhaps not Seriously Enough?

"We know that the operational numbers as far as we can follow them don't scan. We have 4,000-odd special-purpose entities off the balance sheet".

"How 287 Turned Into 7: Lessons in Fuzzy Math", Gretchen Morgenson New York Times, 1/20/02

Onward Through the Fog, I

For the US and Global Financial System:

- We need innovative markets to spread risk and appropriate risk-accepting vehicle and entities
- We need better tools to create and track innovative markets
- We need a regulatory balance between private market speculation and public interest

Onward Through the Fog, I

For the US Energy Sector:

- We need innovative markets to spread risk and appropriate risk-accepting vehicle and entities
- We need to diversify our transportation energy base to reduce the oil:dollar linkage
- We need to bolster both current account and fiscal deficits